



PUERTO RICO AND THE U.S. VIRGIN ISLANDS SOLID WASTE PROGRAMS

February 12, 2007



Sustainability and Multimedia Programs Branch



Sustainable Materials Management Section

- Municipal Solid Waste management program (RCRA Subtitle D)
- Sustainable Materials Management (promotes resource conservation)



Regulatory History

SOLID WASTE DISPOSAL ACT OF 1965 →
RESOURCE CONSERVATION AND RECOVERY
ACT OF 1976 → HAZARDOUS AND SOLID
WASTE AMENDMENTS OF 1984 →
FEDERAL FACILITIES COMPLIANCE ACT OF
1992 → LAND DISPOSAL PROGRAM
FLEXIBILITY ACT OF 1996



EPA's Waste Management Hierarchy





RCRA Subtitle D: Important Points

- Federal Role:
 - Overall regulatory direction,
 - Provide minimum standards,
 - Provide technical assistance to States for planning.
- State and Local Government Role:
 - Planning and direct implementation of solid waste programs
- EPA receives no line item funding to give states.
- The statute does not provide EPA permitting/operational authority.

40 CFR Part 239
Requirements for State Permit Program

40 CFR Part 258
Criteria for Municipal SW Landfills



RCRA D - Important Points (cont.)

- **Limited Enforcement Authority:**
 - Only allows EPA direct enforcement authority for landfill requirements in the case of program disapproval or withdrawal of program approval.
 - In the absence of program approval (as in VI) or in the case of an approved program (as in PR), EPA cannot directly enforce landfill requirements and must use other authorities to address risks to human health and the environment (e.g., RCRA 7003 Imminent and Substantial Endangerment).



RCRA D Important Points (cont.)

- **Resources**

- No funds are provided directly, or through EPA, to states for the management of Subtitle D programs.
- Limited resources are provided to the EPA Regions to implement solid waste, tribal solid waste and Sustainable Materials Management programs.
- EPA's role in solid waste and sustainable materials management has been to convene stakeholders, facilitate dialogue and provide informational and technical resources.



PR's Solid Waste Management Program

- **PR Environmental Quality Board (EQB)**
 - Has authority for permitting and enforcement
- **PR Solid Waste Management Agency (SWMA)**
 - Has authority for solid waste planning and recycling.
- **Municipalities**
 - Own and/or Operate many of the landfills.



History and Key Issues PR

- Historically, each municipality had its own landfill. 60+ landfills
- 1992 - PR passes a Commonwealth analog to RCRA. EQB closes 32 landfills. Adopts recycling target of 35%.
- 1994 - PR receives solid waste program approval from EPA.
- 1991, 1995, 2003, 2007 - PR drafts Solid Waste Management Plans or Recycling Plans. None are implemented.
- 1997 - EQB subsequently altered its solid waste regulations without notifying EPA. Changes in the regulations no longer meet the minimum Federal Requirements in 40 CFR Part 258.
- 2003 - EPA discovers PR's changes to its SW Regulations.



History and Key Issues in PR (Cont.)

- 2004 - The Prevention of Contamination Law is passed. Encourages recycling and the exchange of waste materials.
- 2006 - Present: EPA attempts to get EQB to fix its solid waste regulations. Over this time EPA reviews at least four sets of revised regulations from EQB. To date, none of the revisions have been promulgated.
- Present - 29 Operating Landfills (18 of which are open dumps, 11 are operating only lined cells).
- Present - Tire management issues are a concern. PR had a tire management fee in place, but has since used the funds for other expenditures.
- Present - Claim a 9 - 12% Recycling Rate. Have recycling regulations, which are not enforced.



VI's Solid Waste Management Program

- **VI Department of Planning and Natural Resources (DPNR)**
 - permitting and enforcement
- **VI Waste Management Authority (WMA)**
 - program implementation



History and Key Issues, VI

- 1993 - DPNR applies to EPA for approval of its municipal solid waste landfill permit program.
- 1995 - EPA publishes the Tentative Determination of Adequacy in the Federal Register (FR). Required amendments to the VI's solid waste regulations be made.
- 1996 - EPA advises the VI to promulgate revisions to its solid waste regulations.
- 2000 - EPA publishes the Tentative Determination of Inadequacy in the FR. (Failure to promulgate regulations that meet minimum Federal requirements, lack of landfill enforcement cited)
- 2000 - VI promulgates changes to its solid waste regulations.



History and Key Issues, VI

- 2006 - Draft VI Solid Waste Management Plan.
- 2006 - DOJ referral due to non-compliance with RCRA 7003 Orders.
- 2009 - VI submits an package to EPA for approval of its solid waste program. EPA reviewed and requested additional information be submitted.
- 2012/2013 - Consent Decrees filed for Anguilla and Bovoni.
- 2017 - VI submits additional information from the 2009 EPA request. EPA reviews and submits a comment letter to the DPNR. EPA awaiting information from the VI to complete its application.
- Present - Have neither MSWLF permit program approval or disapproval (only state program not approved in US). Cannot expand existing landfills or site new landfills.



History and Key Issues, VI

- Present - Two existing landfills that have been operating for years are open dumps and do not meet minimum landfill criteria of 40 CFR Part 258.
- Impending Capacity Crisis - Both landfills are rapidly nearing estimated capacity. Anguilla (St. Croix) in approximately 2018, Bovoni (St. Thomas) in under 3 years at most.
- Past and Present - Concerns with Anguilla landfill's proximity to the airport (bird strike hazard).
- Present - The VI does not have a comprehensive Solid Waste Management Plan in place. No solid waste management alternatives have been identified for post landfill closure management of solid waste.
- Past and Present - Virtually no recycling.
- Past and Present - On-going tire management concerns (beyond the CD(s) to remove existing stockpiles).



Experience and Challenges - Enforcement

- PR/VI - All open dumps should have been closed in the 1990s.
- PR - 29 Operating Landfills (18 of which are open dumps, 11 are operating only lined cells).
- PR - EQB has not taken appropriate actions to close open dumps as required by the RCRA statute.
- PR - EQB has not run a credible compliance and enforcement program as part of its solid waste management program to ensure proper operation and maintenance at many landfills and ensure a level playing field.
- PR - Ongoing compliance deficiencies. All open dumps are substantively out of compliance (RCRA Part 258 and CAA violations).



Experience and Challenges - Enforcement

- PR - To date, the Region has taken 13 legal actions (including 2 consent decrees) to address open dumps. 11 of those include recycling requirements.
- VI - Two existing landfills that have been operating for years are open dumps and do not meet minimum landfill criteria of 40 CFR Part 258.
- VI - Both landfills are subject to Consent Decrees for closure being overseen directly by a Federal judge. Federal Regulatory Involvement - EPA, DOJ, FAA, Federal Court
- Enforcement cases to date present ongoing strain on limited EPA enforcement resources.

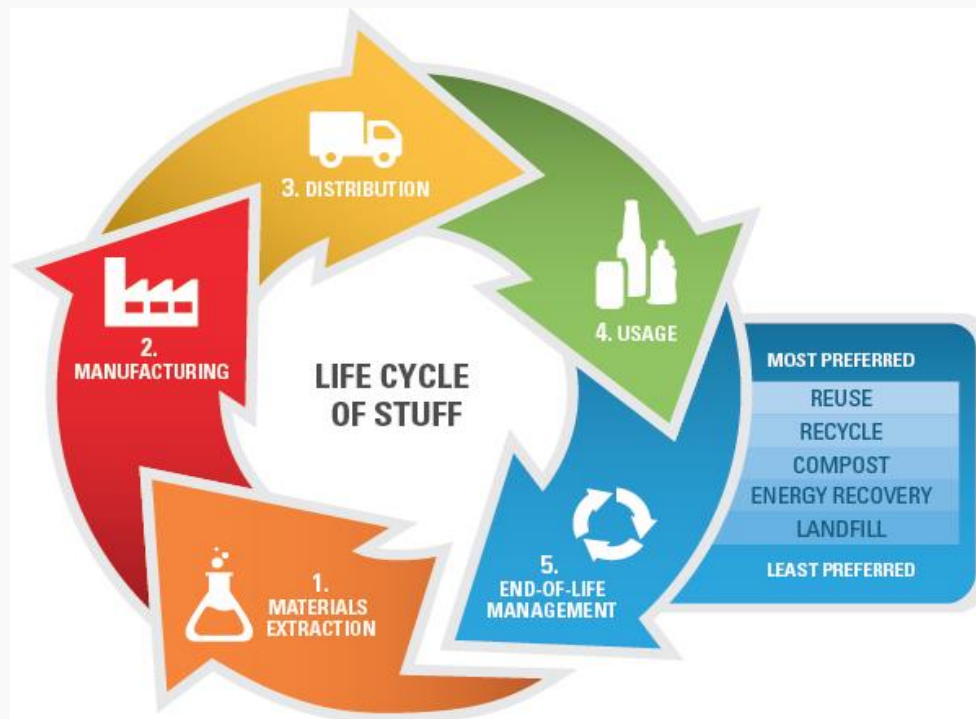


Regional Priorities

- RA Steinberg - Focus on PR solid waste management plan that included a waste-to-energy component.
- RA - Enck - Focused on recycling and composting.
- Encourage PR and the VI to establish and maintain the required elements to run its solid waste programs.
- Encourage PR and the VI to develop and implement a solid waste management plans.
- Close open dumps in PR and the VI.
- Encourage PR and the VI to consider a broad range of options (policy, regulations, technology, etc.) that would minimize generation of wastes and maximize the diversion of materials to landfills.



What is Sustainable Materials Management?



“An approach to serving human needs by using/reusing resources productively and sustainably throughout their life cycles, generally minimizing the amount of materials involved and all associated environmental impacts.”

Sustainable Materials Management: The Road Ahead, EPA



Some SMM Efforts in PR

- PR drafted composting regulations in 2016. EPA reviewed and commented on the draft regulations. PR subsequently promulgated its composting regulations in December of 2016.
- RA Enck encouraged recycling company (Hugo Neu) to open a plant in PR. Hugo Neu is operating a MRF for Guaynabo.
- Food Donation - CASD and CEPD staff worked with YUM brands to bring its food donation program to PR. However, PR's tax structure proved to be a disincentive.
- Funded the PR Materials Exchange. WMA failed to pay maintenance fees per the agreement.



Some SMM Efforts in PR (cont.)

- Recycling Conferences - There have been a number of recycling conferences and summits in PR and the VI over the years. EPA has sponsored at least 2 of these (2008, 2016).
- SMM Challenges - CASD continues to recruit participants for the SMM Challenges. The Federal Green Challenge program has been the most successful.
- Post Office - CASD worked with the Post Office to get its recycling program implemented in PR 2 years ahead of schedule.



Puerto Rico and Virgin Islands Recycling Partnerships

- Launched 2010
- Leveraged R2's Environmental Finance Center grant.
- Funded the partnerships utilizing Solid Waste funds at approximately \$50 - 60k per year.
- Joint initiative by the United States Environmental Protection Agency and the Puerto Rico Solid Waste Management Authority.
- Work with government and the private sector to design programs, educate the public and ensure effective implementation. Main goal is to establish a working partnership to promote waste reduction, recycling and clean composting.



Congressional Interest

- PR Limpio
- Briefing of Congressional Staff and Responding to Incoming Correspondence
- Meetings with Local Authorities, NGOs, Citizens



Challenges

- Lack of resources and capacity to implement a solid waste program.
- Financial constraints.
- History of non-enforcement.
- Failure to charge for services (waste disposal, tire collection, medical waste, etc.).
- Failure to implement plans (finance and capacity issues).
- Illegal dumping. Some estimates of 1600+ sites in PR.
- Lack of traction in recycling efforts.



Interdivisional Strategy for Landfills in PR

- CASD, DECA, ORC and CEPD coordinated to develop the EPA Puerto Rico Solid Waste Action Plan for addressing PR's solid waste program and landfills, in 2017.
- Realization that issuing individual Orders to all open dumps was resource intensive and not consistent with the intent of RCRA D.
- Acknowledging that PR needs to develop its program capacity.
- After several meetings, a draft strategy was developed prior to the storms. Remains a living document.